

The purpose of the Life and Death Matters research project is to identify -- and make available to decision-makers -- accessible solutions to the world's greatest matters of life and death.

We started the project when Dr. Richard Christopher Snyder joined MIT as a Research Affiliate in 2021. At the time, the COVID pandemic was in "full bloom." We continue the work today with the help of Susan Gibson, MA, as well as an outstanding but small team of dedicated advisors. Richard is extremely grateful to Professor Charles Misner who taught a seminar entitled "Science as Culture" in the University of Maryland Honors Program. In that seminar, Richard learned to read great books on the history and philosophy of science -- and became aware of the "paradigm" shifting nature of scientific revolutions. This background enabled him to see a true scientific revolution in how we understand the relationship of food, lifestyle, environment, policy, and public health.

Team members have spent some 3,000 hours taking classes or seminars and attending coaching programs; reading scientific and medical literature; and changing our own behavior since the project started. Staff have attended more than three hundred hours of seminars, summits, and other online presentations by leading researchers and health care practitioners. Our concerns include:

- ➔ Individual and population health
- ➔ Wellness and performance in organizations including workplaces, schools, restaurants, healthcare providers, grocery stores, and faith-based organizations
- ➔ Community/regional re-design for wellness across the life cycle -- as demonstrated in the Blue Zones Projects and other initiatives -- and state or federal policies that influence health and thriving for all citizens.

We are now writing, making short educational videos available online, and continuing to make presentations on practical and scholarly aspects of living well and thriving. Dr Snyder can be reached at richardcsnyder52@gmail.com or racsnyder@mit.edu or by calling 831-402-9995 after texting, so we know that you are calling about the project.

Project Director Background

Prior to founding Life and Death Matters, Dr. Snyder taught and/or did research at the University of Southern California; UCLA; University of California, Berkeley; the Naval Postgraduate School; and several other institutions educating doctoral learners.

From 2009 to 2021, he taught and supervised faculty and doctoral students from business, churches, benevolent projects, and the military – primarily in the areas of:

- research methodology,
- systems thinking applied to solving problems of innovation applied to the public good, and
- doctoral study research projects (similar to dissertations) related to organizations as agents of the public good.

Research projects included studies of strategies for:

- Reducing the failure rate of microfinance loans to the poorest of the poor in Africa;
- Improving the performance of marine inspectors in the United States Coast Guard;
- Implementing health care information systems in hospitals in developing countries;
- Surviving and thriving as a business in an industry where 95% of firms were failing;
- Integrating information technology in United States healthcare payers after mergers and acquisitions; and
- Engaging Millennials in faith-based organizations.

Those trained and/or supervised by Dr. Snyder have moved to MIT, consulting, Harvard, HEC, and other leading educational organizations – and/or been promoted to higher-level position in business and the military.

OVERVIEW OF HEALTH, ILLNESS, and THE REST OF “LIFE AND DEATH MATTERS”

About this document

The purpose of this document is to provide the lay reader (the non-scientist who may not be familiar with academic research and publications) a quick overview of some major developments in the fields pertaining to life and death matters. It provides a very brief overview of some invaluable sources and key lessons from deep engagement in the coaching community; scholarly work on lifestyle medicine; and breakthroughs in “food as medicine” since about 2008. There are also some background publications and other media that give an overview of how we got to the point where chronic/non-communicable diseases became the major killers in high income nations.

Two key points to keep in mind:

1. Read the book, *The Great Influenza: The Story of the Deadliest Pandemic in History*, by John M. Barry, to get a sense of the power of modern pharmaceutical medicine to fight infectious (but not chronic) diseases. Lessons include: In 1918, a highly-lethal plague swept much of the world,

and was sufficiently deadly that it killed millions of young, healthy members of the population. (This was largely unlike COVID, which devastated some of the aged and those with multiple prior medical conditions). Researchers at various institutions – including Johns Hopkins -- worked rapidly to develop effective vaccines. Due to the nature of the health of people killed by the plague, many scientists abandoned the emphasis on “the terrain” or state of the bodies of the victims before they were infected.

2. See Michael Pollan’s In Defense of Food for its discussion of how field researchers and medical doctors working before World War II had discovered that a fairly predictable series of health problems followed the introduction of the Western diet to regions that had previously subsisted on foods available locally. The pattern typically started included obesity followed by such chronic conditions as diabetes, high blood pressure, stroke, and dementia. There is more about this book in the RESOURCES section of this document.

What is Likely to Kill You (if you live in a high-income nation)

The United States and other high-income nations are exhibiting an epidemic of non-communicable /chronic illnesses. Six of the ten leading causes of death in the United States in 2022 were non-communicable diseases.

The numbers in parentheses indicate the number of deaths.

Heart disease (702,880)

Cancer (608,371)

Stroke/Cerebrovascular Diseases (165,393)

Chronic Lower Respiratory Diseases (147,382)

Alzheimer’s disease (120,122)

Diabetes (101,209)

Source: “Leading Causes of Death,” at National Center for Health Statistics.

Good news

The great thing about the latest modern science is that it supports the idea that literally hundreds of foods can be extremely healthy for us.

These include things that grow naturally on bushes, in the ground, or on trees; as well as some that live in water, fly, or walk around. This is in contrast to the effects of “edible food-like substances” or “ultra-processed foods” (UPFs). UPFs are packaged goods which typically contain artificial substances. They normally have five or more ingredients; are usually based on highly-refined wheat, corn, or soy and/or sugar, salt and fat. They also have very long shelf-life and ads for the products may target children and other at-risk populations. UPFs now constitute about 60% of the calories in the American diet and are associated with a greater risk of early death as well as physical and mental health issues. (See Ultra-Processed People and Food Fix in the book list below.)

- ➔ Doctor William Li – medical doctor and research innovator at the Angiogenesis Foundation in Boston – has documented many foods that help the body defend against illness in his ground-

breaking 2010 TEDX TALK “Can we eat to starve cancer?” and in his book, Eat to Beat Disease (also below).

→ Dr. Li reported that laboratory research, epidemiological studies, and further research using other methods demonstrate that many specific foods can be used to strengthen five of the body’s health defense systems. The five systems are:

- a. Angiogenesis
- b. Regeneration (via the body’s own production of stem cells)
- c. The microbiome
- d. DNA repair, and
- e. The immune system.

→ In Eat to Beat Disease, he explained the new science of food and health, and listed over 100 specific foods that regulate the body’s defense systems. He also listed 25 foods, all of which strengthen all five of the defense systems.

Dr. William Li, MD’s list of foods that strengthen all five of the body’s *health defense systems*

FRUITS	More FRUITS	VEGETABLES	BEVERAGES
Apricots	Peaches*	Bamboo Shoots	Black tea
Blueberries*	Plums	Carrots	Chamomile tea
Cherries*		Eggplant	Coffee
Kiwi fruit		Fiddleheads	Green tea
Lychee		Kale*	
Mangos			
NUTS/SEEDS	SEAFOOD	OILS	SWEETS
Flax seeds	Squid ink	Olive oil (EVOO)	Dark Chocolate
Pumpkin seeds			
Sesame seeds			
Sunflower seeds			
Walnuts			

**You may be better off buying these as organic produce, if you can afford to do so, as they contain relatively high levels of pesticides. See the lists of dirty and clean produce below*

THE ENVIRONMENTAL WORKING GROUP DIRTY DOZEN

CONVENTIONALLY-GROWN PRODUCE WITH THE HIGHEST CONCENTRATION OF PESTICIDE RESIDUES (2023)

1 Strawberries	5 Pears	9 Bell and hot peppers
2 Spinach	6 Nectarines	10 Cherries
3 Kale, collard, and mustard greens	7 Apples	11 Blueberries
4 Peaches	8 Grapes	12 Green beans

THE ENVIRONMENTAL WORKING GROUP CLEAN FIFTEEN

CONVENTIONALLY-GROWN PRODUCE WITH THE LEAST PESTICIDE RESIDUES (2023)

1 Avocados	4 Onions	7 Asparagus	10 Cabbage	13 Sweet potatoes
2 Sweet corn	5 Papaya	8 Honeydew melon	11 Mushrooms	14 Watermelon
3 Pineapple	6 Frozen sweet peas	9 Kiwi	12 Mangoes	15 Carrots

Note: We find it helpful to think of most of these as primarily thick-skinned produce.

The Blue Zones Regions (of Longevity and Thriving)

1) Overview

- a. The Blue Zones are those five regions in the world that have the longest-living people and/or the most centenarians.
- b. The five Blue Zones are Ikaria, Greece; Costa Rica's Nicoya Peninsula; Okinawa, Japan; Sardinia, Italy; and Loma Linda, California.
- c. The Blue Zones have been featured in numerous publications and other media, but perhaps the most authoritative are various National Geographic publications; multiple books by Dan Buettner; and a 2023 Netflix documentary.
- d. Most of the Blue Zones interviewees lived lifestyles that involved eating local food, moving naturally, having strong social networks, and working – or at least staying physically active – most of their lives.

- e. Their lifestyle practices have been summarized in various ways, including:
 - 1. Move Naturally
 - 2. Have Purpose
 - 3. Downshift
 - 4. Follow the 80% Rule
 - 5. “Plant Slant”
 - 6. Friends @ Five
 - 7. Belong
 - 8. Right Tribe
 - 9. Loved Ones First
- f. An interesting fact is that in their interviews with hundreds of centenarians and/or those nearly 100 years old revealed that all but a handful were involved in a life of faith and worship. As Dan Buettner noted in The Blue Zones Challenge: “Belong[ing] to a faith-based community and attend[ing] services regularly [can] add years to your life.”
- g. A further note: The BZ research methodology was multi-phased. It included identifying regions with the greatest longevity as well as a multiple-case study conducted by an interdisciplinary team including demographers; a journalistic team including a primary writer, a photographer, varied staff; and consultations with public health and medical experts. In fact, the list of credits in the seminal Blue Zones book takes several pages. The team received funding from various sources including the United States government and AARP.

2) *Why the Blue Zones research is worth believing*

- a. Many of the findings could be said to be “triangulated” by multiple studies involving various methods, theories, and populations.
- b. Large numbers of leading lifestyle medicine experts, health and thriving researchers, and performance or health and wellness coaches point to the following behaviors leading to high-level wellness:
 - i. Eating “real” food (not UPFs). As science journalist Michael Pollan wrote: “Eat food. Mostly plants. Not too much. (See In Defense of Food, below.)
 - ii. Moving regularly and exercising
 - iii. Sleeping at least 7 to 9 hours per night
 - iv. Managing or optimizing challenge and stress
 - v. Loving and maintaining constructive social relationships
 - vi. Living a life of purpose
 - vii. Having faith and participating in churches or other faith-based organizations
 - viii. Doing exercised that promote gratitude and other positive mindsets
 - ix. Choosing/living in areas with abundant produce, clean air, healthy water, climate that supports life, toxin-free housing, and so on

3) *Ways to implement the Blue Zones lessons*

- A. Watch the Netflix documentary video series (see listing below)
- B. If you want to apply it in your own live, consider doing the Blue Zones Challenge (in book list). The senior researcher of our project did so for a period of three months and had the following results:
 - Lowered blood pressure from “high” to the optimal zones (numbers available) and
 - Lost 16 pounds, dropping from an excessive BMI (body mass index) into the normal range. The weight loss has been sustained (except for the usual holiday weight gains, which were followed by a return to the normal BMI).

RESOURCES

Books (alphabetical by title)

The Blue Zones: 9 Lessons for Living Longer from the People who’ve Lived the Longest (second edition) by Dan Buettner. (2012). National Geographic.

The Daniel Plan by Rick Warren, D.Min; Daniel Amen, MD; and Mark Hyman, MD. (2013). Zondervan.

Eat to Beat Disease: The New Science of How Your Body Can Heal Itself by William Li, MD. (2019). Grand Central Publishing.

Food Fix: How to Save Our Health, Our Economy, Our Communities, and Our Planet--One Bite at a Time by Mark Hyman, MD. (2020). Little, Brown Spark.

The Great Influenza: The Story of the Deadliest Pandemic in History by John M. Barry. (2005). Penguin.

How the Other Half Eats: The Untold Story of Food and Inequality in America by Priya Fielding-Singh, PhD. (2021). Little, Brown Spark.

“Inequality in America manifests in many ways, but perhaps nowhere more than in how we eat. From her years of field research, sociologist and ethnographer Priya Fielding-Singh brings us into the kitchens of dozens of families from varied educational, economic, and ethnoracial backgrounds to explore how—and why—we eat the way we do. We get to know four families intimately: the Bakers, a Black family living below the federal poverty line; the Williamses, a working-class white family just above it; the Ortegas, a middle-class Latinx family; and the Cains, an affluent white family.” (Source: online publicity notes for the book)

In Defense of Food: An Eater’s Manifesto by Michael Pollan. (2008). Penguin Press.

His opening words, which appear on the book cover, have become a mantra of sorts: “Eat food. Not too much. Mostly plants.” By food, he does not mean the sort of highly processed food that one finds on the shelves of convenience stores, gas stations, and even pharmacies. The most highly processed of such foods are now referred to as ultra-processed foods (or UPFs). He refers more to living things that swim, fly, grow on trees, grow from or in the ground, and so on.

From the *New York Times* review by Janet Maslin:

In this lively, invaluable book . . . [Pollan] assails some of the most fundamental tenets of *nutritionism*: that food is simply the sum of its parts, that the effects of individual nutrients can be scientifically measured, that the primary purpose of eating is to maintain health, and that eating requires expert advice. Experts, he says, often do a better job of muddying these issues than of shedding light on them. And it serves their own purposes to create confusion. In his opinion the industry-financed branch of nutritional science is "remarkably reliable in its ability to find a health benefit in whatever food it has been commissioned to study."

Metabological: The Lure and the Lies of Processed Food, Nutrition, and Modern Medicine by Robert H. Lustig, MD, MSL. (2021). Harper Wave.

The Poison Squad: One Chemist's Single-Minded Crusade for Safety at the Turn of the Twentieth Century by Deborah Blum. (2018). Penguin Books.

Ultra-Processed People: The Science Behind Food That Isn't Food by Chris van Tulleken, PhD. (2023). W. W. Norton and Company.

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NOTE: This is a "popular" book, whereas the others (above) are by MDs, PhDs, professors, and/or journalists who specialize in science:

The Gospel of Wellness: Gyms, Gurus, Goop, and the False Promise of Self-Care by Rina Raphael. (2022). Henry Holt and Company.
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Films (There are too many to mention, but we have found these especially useful.)

Blue Zones Netflix documentary. <https://www.bluezones.com/documentary/> (2023).

Can we Eat to Starve Cancer? TEDX talk By William Li, MD. (2010).

Food, Inc. documentary by Robert Kenner (Director). Narrated by Michael Pollan and Eric Schlosser. (2008.)

Conferences and other online media (university and other symposia, coaching programs, annual challenges with leading doctors and researchers, podcasts and live online seminars, etc.)

- A. "Evidence-Based Chronic Disease Solutions" at the 2023 Lifestyle Medicine Summit:
 - a. This is a free online event, with the option to purchase lifetime access to videos and transcripts of the presentations. Speakers included many of the leading researchers and medical doctors doing work on lifestyle, longevity, and food as medicine. Life and Death Matters personnel attended many of the 2023 Summit presentations. We found the speakers to include many leading experts whose work we were reading – or listening to -- and learned of many we did not already know about. This "Who's Who" of leading thinkers and doctors was not only a "kiss and tell" about the problems in conventional

modern medicine's approaches to chronic illness, it highlighted many of the people whose work is now influencing us.

- b. A link for free online admission to the 2024 conference follows:
<https://prescribe.lifestylemedicine.io/>
- B. The "Live Long and Thrive" (2023) summit, hosted by Brian Vaszily. We purchased the printed transcripts and lifetime access to the recordings.
- C. The lists of the most "dirty" and "clean" produce, based on USDA data, from the Environmental Working Group in Washington, DC.
- D. Numerous online presentations and small conferences by the Personalized Lifestyle Medicine Institute, often hosted by founder Jeff Bland, PhD, one of the "fathers" of lifestyle medicine.
- E. Annual conferences sponsored by Ocean Robbins and the Food Revolution Network. This is a vegan or "plant-powered" organization that has about a million members.
- F. Video by computer science researcher and Georgetown professor Cal Newport on digital minimalism. (Available at Heroic Social – see below.)
- G. Various tools provided by the Heroic Social platform hosted by Brian Johnson.
According to John Mackey, co-founder of Whole Foods: "Heroic is the best self-development platform in the world." [Disclosure: Mackey is also an investor in Heroic.] The Heroic Social platform offers notes, videos, audios, worksheets, and motivational quotes that are typically consistent with other lifestyle medicine recommendations, including many of the Blue Zones findings (for example, those related to eating, moving, and sleeping). Heroic resources include:
 - a. The Heroic smartphone app, that allows one to
 - i. Track personal virtues or character strengths (based in part on the research of positive psychologist Martin Seligman) -- as well as daily disciplines related to energy, work, and love.
 - ii. Gain access to content offered on the Heroic Social site.
 - b. A book called Arete', by founder Brian Johnson.
 - c. Occasional live, online and face-to-face, events.
 - d. A coach training program.
 - e. Large numbers of "Philosopher's Note" book summaries on topics including prospering, eating well, Stoic virtues, movement, relationships, and sleep. The range and depth is exhaustive – if not actually exhausting.

A sampling of other courses and coaching programs we have found valuable

Jack Canfield and Patty Aubery's Mastermind Momentum program, which cost \$6500.

The Heroic Coach training program. Dr. Snyder is a Lifetime Coach member as well as a Heroic Ambassador. We can provide links for free trial subscriptions to Heroic Social.

William Li, MD's online Eat to Beat Disease programs. There are periodic free online classes with Dr. Li and a multi-week online and live face-to-face program that includes office hours with Dr. Li and workbooks. We bought the program when it was \$400 and also paid to attend his less expensive Eat to Beat Your Diet program. We found both to be worthwhile, as was interaction and correspondence with Dr. Li.

EPISTEMOLOGICAL NOTE: RESEARCH AND POPULAR PUBLICATIONS WE READ HAVE INCLUDED THE FOLLOWING WAYS OF GATHERING KNOWLEDGE

1. Lab Study (LS)
2. Epidemiological Study (ES)
3. Field Study (FS)
4. Randomized Controlled Trial (RCT)
5. Personal Experience (PE)
6. Journalistic (J)
7. Literature Review (LR)
8. Meta-Analysis (M-A)

Additional information about the founder

Dr. Richard Christopher Snyder, MBA (UCLA), PhD (University of Southern California); Research Affiliate, Massachusetts Institute of Technology and Director, Life and Death Matters Accessible Solutions project.

He has had a lifelong interest in what is now known as “Food as Medicine.” Food as Medicine was recognized in the 2022 White House Conference on Hunger, Nutrition and Health. It is the leading topic in what we believe to be a “scientific revolution” in prevention of chronic illness, strengthening the body’s health defense systems; and factors and practices associated with longevity, thriving, and quality of life. Dr. Snyder’s interest in food and health dates back to his training in the Cuisine Naturelle whole foods Cook’s Course in the 1980s.

He has also served the public good as co-founder of the Center for Nonprofit Management in Los Angeles; Director of Strategic Planning for the national Support Center [for Nonprofit Management]; co-founder with Bill Maier and Roy Doughty of the Project on Spirituality and Working Life at Berkeley’s Graduate Theological Union Center for Ethics and Social Policy.

Dr Snyder has had a lifelong interest in the effects of food on health and behavior. His professional training has emphasized the practical aspects of leadership of socially-beneficial innovations and changes.

Before founding Life and Death Matters, Dr. Snyder’s 45-year professional work life and community service has largely involved working at the cutting edge of

- ➔ Practical applications of systems thinking to questions of human performance and social good
- ➔ Leadership and leadership communication
- ➔ Social research applied to the public good
- ➔ Teaching, training, and mentoring adult learners for advancement in careers in consulting, military leadership, the public sector, and other good cause organizations=
- ➔ Constructive faith-based outreach and service to urban “homeless and hungry”
- ➔ Nonprofit and public interest management and policy
- ➔ Spirituality in working life
- ➔ High performance and patterns of individual difference in work life
- ➔ Applications of media and communication technology to learning